C2475-1
9/15/88

PENSION WORLD

Investment Managers / Plan Sponsors / Employee Benefits August 1988

Japan's Increasing Yen For Global Investing Draws World Attention

1988 State Retirement System Investment Survey

Investment Managers
• Plan Sponsors •
Employee Benefits

A Publication Of
Communication Channels, Inc.

PENSION WORLD

August 1988
Volume 24 Number 8

About The Cover: In the aftermath of Black Monday, foreigners have been keeping a more watchful eye on the Japanese market and the country's foreign investments.

Photograph by Jerry Hoy, Double Vision Inc., Atlanta.

COLUMNS

Insights	6
New York Update	8
Washington Update	10
Plan Design	60
Perspective on Benefits	63
Perspective on Investments	64
Guest Viewpoint	66

DEPARTMENTS

Editor's Notes	4
World News	51
News Briefs	55
Executive Suite	56
Calendar	57
Resources	58
Technology Review	59

INVESTMENTS

Japan's Increasing Yen For Global Investing Draws Attention 12
PENSION WORLD Exclusive Interview
A team of experts from Kleinwort Benson International discusses Japan's importance in the interplay of world markets.

1988 State Retirement System Investment Survey 23
PENSION WORLD Exclusive Survey
This survey outlines the investment practices of public-employee, teacher, police and other local-government funds.

EMPLOYEE BENEFITS

Retirement No Longer Means Just A Handshake And A Gold Watch 34
By Michael Dieschbourg
The trend toward preretirement consulting is gaining favor and raising retiree expectations.

Lessons Learned In The Battle To Control Health-Care Costs 37
By Robert Chernow
A recent survey shows corporate America's weaknesses and the need for a strategic battle plan.

Defined-Contribution Plans Continue The Trend Toward Unbundling 39
By John J. Mulligan Jr.
Participant needs and sponsors' sophisticated requirements dictate the departure from bundling.

The Effect of ERISA's Proposed 404(c) Regulations 42
By Jeffrey Paster
404(c) would set specific investment ranges and ease employees shifting of plan investments.

Plan Sponsors Seek To More Clearly Define Responsibilities
By Steven G. Vernon and Mark W. Scott
Proposed Labor Department regulations force fiduciaries in defined-contribution plans to re-evaluate their tasks.

Retiree Health-Benefit Liability Reaches The Crisis Point 47
By Fred Van Remortel
The failure to project future costs has endangered companies' long-term profitability.

BPA

Pension World is published monthly by Communication Channels, Inc., George E. Fowkes, Chairman of the Board; Jerrold France, President; Scott Smith, Secretary; Buford Bryant, Treasurer. Editorial and advertising offices at 6255 Barfield Road, Atlanta, GA 30328. Telephone (404) 256-9800. Telex 4611075COMCHANI. *Pension World* is a registered trademark of Communication Channels, Inc. © 1988 by Communication Channels, Inc. Second class postage paid at Atlanta, GA, and at additional mailing offices. Subscription rates: U.S., 1 year, $44; 2 years, $68; Canada and Mexico, 1 year, $48; Overseas Sea Mail, $62; Overseas Air Mail, $109. Single copies, $4. Group rates available. Directory copies: *Pension World* State Retirement Systems Survey (August), $9.95; *Pension World* Real Estate Portfolio Managers Directory (September), $9.95; *Pension World* Directory of Master and Directed Trust Services (December), $9.95; *Pension World* Software Products Directory (March), $14.95. The opinions expressed by authors and contributors to *Pension World* are not necessarily those of the editors or publisher. Articles appearing in *Pension World* may not be reproduced in whole or in part without the express permission of the publisher. Microfilm copies of *Pension World* are available from University Microfilms, 300 North Zeeb Road, Ann Arbor, MI 48106. Postmaster: Please send form 3579 to Circulation Department, *Pension World*, 6255 Barfield Road, Atlanta, GA 30328.

1988 State Retirement System Investment Survey

This survey outlines the investment practices of public-employee, teacher, police and other local-government funds.

The 1988 State Retirement System Investment Survey, compiled by the directory department of PENSION WORLD, provides information on the investment practices of public-employee retirement systems, teacher and school-employee retirement systems, police and firefighter retirement systems as well as local-government systems. However, the survey does not cover retirement systems of cities or individual municipalities.

This year's survey reports on 65 systems in 42 states. The magazine mailed questionnaires to 130 statewide systems in March, giving the survey a 50 percent rate of return. The respondents included 23 statewide public-employee retirement systems, 12 educational retirement systems, 12 "umbrella" systems and 18 other systems.

The assets of the retirement systems that responded to the survey ranged from $86.8 million for the Peace Officers' Annuity & Benefit Fund of Georgia to $44.5 billion for the California Public Employees Retirement System. Because some systems reported assets at cost while other systems used market figures, a sum of the total assets represented in the survey cannot be reported.

All but eight of the reporting systems (two each in Indiana and West Virginia and one each in Illinois, Indiana, South Carolina and Texas) invested in common or preferred stock. When this asset class was utilized by the funds, generally this was the largest investment. Other investments used by most funds were U.S. government securities and agencies, corporate bonds, mortgages, other real estate investments, short-term instruments and cash. Additionally, some retirement funds utilized guaranteed investment contracts, international investments (equity and fixed income), leveraged-buyout funds and venture-capital investments.

A large majority of the funds also utilized some internal management of the investments. Indeed, 16 funds reported that they are 100 percent internally managed. In other cases, internal management was limited to certain investments, including short-term cash management.

Of the reporting retirement funds that utilize discretionary-investment managers, the Pennsylvania State Employees' Retirement System tops the list with 42. Other systems that use a large number of outside managers are the Minnesota State Board of Retirement, the Pennsylvania Public School Employees Retirement System and the Virginia Supplemental Retirement System.

The following listings are based on the information provided by the individual funds to the directory department of PENSION WORLD. While the magazine has attempted to prepare this information as carefully as possible, PENSION WORLD assumes no responsibility for the accuracy of information presented in the listings.

The information contained in the 1988 State Retirement System Investment Survey was compiled by Barbara Katinsky, managing editor of the directory department, and Helen Frye, listings editor.

RETIREMENT SYSTEMS OF ALABAMA
135 South Union St.
Montgomery, AL 36130
Contact: Dr. David G. Bronner, Chief Executive Officer, (205) 832-4140

Information current as of 3/31/88; all figures at book value

Total assets: $6.6 billion
Common and preferred stock: $981.3 million
U.S. government securities and agencies: $175.1 million
Corporate bonds: $1.9 billion
Mortgages: $1.2 billion—privately held, government backed, $625 million
Cash and short-term securities: $772 million
Other investments: GIC $13.3 million
Privately placed $923.4 million
Percent of fund internally managed: 100%
Investment advisor: AmSouth Bank

ALASKA PUBLIC EMPLOYEES RETIREMENT FUND
Treasury Division, Department of Revenue
P.O. Box SB
Juneau, AK 99811
Contact: Kenneth L. Shaffer, Investment Officer, (907) 465-2350

Information current as of 02/29/88

Total assets: $1.9 billion
Common and preferred stock: $612.1 million
U.S. government securities and agencies: $799.1 million
Corporate bonds: $235.6 million
Mortgages: $121 million—privately held
Other real estate: $114 million
Cash and short-term securities: $6 million
Percent of fund internally managed: 66%
Discretionary investment managers: Domestic equities managed by Fred Alger, Lehman, Invesco - 29%; Foreign equities managed by Morgan Guaranty, Citibank - 4%

TEACHERS RETIREMENT FUND
Treasury Division, Department of Revenue
P.O. Box SB
Juneau AK 99811

Information current as of 2/29/88

Total Assets: $1.2 billion
Common and preferred stock: $398.7 million (domestic and foreign stocks combined)
U.S. government securities and agencies: $467.9 million
Corporate bonds $152.6 million
Mortgages: $102.2 million—privately held
Other real estate: $73.4 million
Cash and short-term securities: $1.4 million
Percent of fund internally managed: Fixed income, mortgages - 66% Discretionary investment managers: Domestic equities managed by Fred Alger, Lehman, Invesco - 29%; Foreign equities managed by Morgan Guaranty, Citibank - 4%

ARIZONA STATE RETIREMENT SYSTEM
P.O. Box 33910
3815 N. Black Canyon Highway
Phoenix, AZ 85015
Contact: Doug Lemon, Investment Director, (602) 255-5131

Information current as of 4/25/88; all figures at market value

Total assets: $6.2 billion
Common and preferred stock: $2.7 billion
Other investments: $2.9 billion—Fixed income, $468.1 million—Temporary investments; $45.2 million—Accrued income; $2.3 million—net receivables

ARKANSAS STATE HIGHWAY EMPLOYEES RETIREMENT SYSTEM
P.O. Box 2261
Little Rock, AR 72203
Contact: Larry Dickerson, Executive Secretary, (501) 569-2515

Information current as of 2/29/88

Total assets: $241 million
Common and preferred stock: $80 million
U.S. government securities and agencies: $72 million
Corporate bonds: $80 million
Cash and short-term securities $3 million
Discretionary investment manager: Retirement Board of Trustees
Investment advisors: Mike Murray, Loomis Sayles & Co., Inc.

ARKANSAS TEACHER RETIREMENT SYSTEM
Education Bldg. West
#3 Capitol Mall
Little Rock, AR 72201
Contact: Mrs. Mavolene C. Booth, Retirement Fund Investment Manager, (501) 682-1517

Information current as of 1/31/88

Total assets: $1.7 billion
Common and preferred stock: $705.8 million
U.S. government securities and agencies: $634.4 million
Corporate bonds: $103 million
Mortgages: $50.1 million—privately held, $42.4 million; government backed, $7.7 million
Cash and short-term securities: $156.4 million
Other investments: $567 thousand, Capital Notes
Percent of fund internally managed: 9.7% (short-term)
Discretionary investment manager: Oppenheimer Capital
Investment advisor: First Commercial Bank

CALIFORNIA PUBLIC EMPLOYEES RETIREMENT SYSTEM
400 P St., Room 3310
Sacramento, CA 95814
Contact: Greta Marshall, Investment Manager, (916) 326-3400

Information current as of 5/2/88; all figures at market value

Total assets: $44.5 billion
Common and preferred stock: $18.4 billion
U.S. government securities and agencies: $9.6 billion
Corporate bonds: $8.9 billion
Mortgages: $2.8 billion
Other real estate: $2.5 billion
Cash and short-term securities: $2.3 billion
Other investments: $0.6 billion
Percent of fund internally managed: 90%
Discretionary investment managers: Lazard Freres; Roll & Roff; RCM Capital; TFA Capital; Batterymarch; Dimensional Fund Advisors; First Chicago Investment Advisors; Atalanta Sosnoff; Citicorp
Investment advisors: Equitable Real Estate Investment Mgmt; Heitman; Trust Co. of West; LaSalle; F.I.A. Associates

COLORADO FIRE & POLICE PENSION ASSOCIATION
5290 DTC Pkwy.
Englewood, CO 80111
Contact: John Rogers, Executive Director, (303) 770-3772

Information current as of 3/31/88; all figures at market value

Total assets: $486.4 million
Common and preferred stock: $219.6 million
U.S. government securities and agencies: $146.5 million
Corporate bonds: $21.3 million
Other real estate: $47.6 million
Cash and short-term securities: $43.5 million
Other investments: Venture capital, $7.9 million
Percent of fund internally managed: 14%
Discretionary investment managers: Bollinger; Oppenheimer; Dremen; Prisa; RREEF; JMB; Mellon (real estate); Delaware Putnam
Investment advisor: Mercer-Meidinger

FLORIDA STATE BOARD OF ADMINISTRATION
P.O. Drawer 5318
Tallahassee, FL 32303
Contact: Cliff Hinkle, Executive Director, (904) 488-4406

Information current as of 2/29/88; all figures at market value

Total assets: $13.8 billion
Common and preferred stock: $5.5 billion
U.S. government securities and agencies: $5.5 billion
Mortgages: $1.5 billion
Other real estate: $640.0 million
Cash and short-term securities: $755.2 million
Percent of fund internally managed: 57%
Discretionary investment managers: Aetna Life & Casualty Insurance, Fred Alger Mgmt., Alliance Capital Mgmt., Ariel Capital Mgmt., Barnett Bank, Barrow, Hanley, Mewhinney & Strauss, Bear Stearns Asset Mgmt., Delaware Investment Advisors, Denver Investment Advisors, Eagle Asset Mgmt., Equitable Life Assurance Society, First Chicago Investment Advisors, Goldman Sachs, IDS Investment Advisors, John Hancock Mutual Life Insurance Co., Invesco Capital Mgmt., LaSalle Advisors, Lazard Freres Asset Mgmt., Prudential Asset Mgmt., Stein Roe and Farnham, Inc., Wells Fargo Bank, Wells Fargo Investment Advisors, Westwood

EMPLOYEES' RETIREMENT SYSTEMS OF GEORGIA
Two Northside 75, Suite 300
Atlanta, GA 30318
Contact: Graham R. Lynch, Director, Investment Services Division, (404) 656-2151

Information current as of 2/29/88

Total assets: $2.5 billion
Common and preferred stock: $916.3 million (all common)
U.S. government securities and agencies: $1.2 billion
Corporate bonds: $227.7 million
Mortgages: $7.5 million
Other real estate: $1.9 million
Cash and short-term securities: $149.6 million
Percent of fund internally managed: 100%
Investment advisors: First Wachovia, Invesco Capital Mgmt.; Thorndike, Doran, Paine & Lewis

TEACHERS RETIREMENT SYSTEM OF GEORGIA
Two Northside 75, Suite 400
Atlanta, GA 30318
Contact: Graham R. Lynch, Director, Investment Services Division, (404) 656-2151

Information current as of 2/29/88

Total assets: $6.3 billion
Common and preferred stock: $2.4 billion
U.S. government securities and agencies: $3 billion
Corporate Bonds: $482.0
Mortgages: $20.9 million
Other real estate: $2 million
Cash and short-term securities: $315.6 million
Percent of fund internally managed: 100%
Investment advisors: C&S Investment Advisors; Invesco Capital Mgmt.; Trusco Capital Mgmt.; Thorndike, Doran, Paine and Lewis; Wall, Patterson, Hamilton & Allen; Atlanta Capital Mgmt.

PEACE OFFICERS' ANNUITY & BENEFIT FUND OF GEORGIA
P.O. Box 56
Griffin, GA 30224
Contact: Flynt Langford, Sec./Treas., (404) 228-8461

Information current as of 2/29/88

Total assets: $86.8 million
Common and preferred stock: $25.1 million
U.S. government securities and agencies: $22.6 million
Corporate bonds: $22.9 million
Mortgages: $47.4 thousand — privately held
Cash and short-term securities: $16.2 million
Percent of fund internally managed: 100%
Investment advisors: Thorndike, Doran, Paine & Lewis, Inc.

GEORGIA FIREMEN'S PENSION FUND
720 Church St.
P.O. Box 1623
Decatur, GA 30030
Information current as of 5/31/88

Total assets: $99.8 million
Common stock: $44.9 million
U.S. government securities and agencies: $29 million
Corporate bonds: $9.7 million
Mortgages: $199.2 thousand
Other real estate: $125 thousand
Cash and short-term securities: $15.9 million
Percent of fund internally managed: 1%
Discretionary investment managers: First Wachovia Corp., 75%; Thorndike Doren Paine & Lewis, 25%

PUBLIC EMPLOYEE RETIREMENT SYSTEM OF IDAHO
Statehouse
700 W. State St.
Boise, ID 83720
Contact: Ronald V. Crouch, Asst. Director, Fiscal, (208) 334-3365

Information current as of 2/29/88

Total assets: $1.2 billion
Common and preferred stock: $669.1 million
U.S. government securities and agencies: $193.3 million
Corporate bonds: $100.2 million
Mortgages: $75.8 million—privately held, $7.3 million
Other real estate: $96.0 million
Cash and short-term securities: $98.4 million
Other investments: Income receivable, $9.3 million
Investment advisor: Frank Russell Trust Co.

ILLINOIS STATE BOARD OF INVESTMENT
180 North LaSalle Street, Suite 2015
Chicago, IL 60601
Contact: Robert J. Harmon, Director, (312) 793-5710

Information current as of 12/31/87; all figures at market value

Total assets: $2.5 billion
Common and preferred stock: $894 million
U.S. government securities and agencies: $308 million
Corporate bonds: $622 million
Other real estate: $239 million
Cash and short-term securities: $218 million
Other investments: $219 million
Percent of fund internally managed: 70%
Investment advisors: Ariel, Cooke & Bieler; Disciplined; Fidelity; Lazard Freres; Lincoln Capital; Newbolds; Trinity; Trust Company of the West; Calamos; J.P. Morgan Delaware

TEACHERS RETIREMENT SYSTEM OF THE STATE OF ILLINOIS
P.O. Box 19253
2815 W. Washington
Springfield, IL 62794-9253
Contact: Charles F. Hofer, Investment Officer, (217) 753-0370

Information current as of 3/31/88; all figures at market value

Total assets: $6.7 billion
Common and preferred stock: $3.1 billion (includes $423 million in international equities)
U.S. government securities and agencies: $1 billion
Corporate bonds: $1.4 billion
Mortgages: $208 million—government backed
Other real estate: $379.9 million
Cash and short-term securities: $548 million
Other investments: Venture capital, $23 million
Discretionary investment managers: Equity managers: Alliance Capital Mgmt. Corp.; American National Bank and Trust Co. of Chicago; Ariel Capital Mgmt., Inc.; Capital Supervisors, Inc.; Cedar Hill Associates, Inc.; Kemper Financial Services, Inc.; Kemper-Murray Johnstone International, Inc.; State Street Bank and Trust Co. (EAFE Ex-Japan); State Street Bank and Trust Co. (EAFE Index); Fixed income managers: Bear Stearns Asset Mgmt.; Dreyfus Mgmt., Inc.; Marine Investment Mgmt. Co.; Pacific Investment Mgmt. Co.; State Street Bank and Trust Co. (SLG/C Index); Real estate managers: Bennett & Kahnweiler Realty Advisors, Inc.; F.I.A. Associates; First Chicago Investment Advisors; JMB Institutional Realty; TCW Realty Advisors; Venture capital: Frontenac Venture Co.

ILLINOIS STATE UNIVERSITIES RETIREMENT SYSTEM
50 Gerty Dr.
Champaign, IL 61820
Contact: Kenneth E. Codlin, Investment Officer, (217) 333-3860

Information current as of 2/29/87; all figures at market value

Total assets: $2.9 billion
Discretionary investment managers: Aetna Realty; Batterymarch; Equitable; Fayez Sarofin; JMB Realty; Pacific Investment; RREEF; Wells Fargo
Investment advisor: Ennis, Knupp & Associates

INDIANA PUBLIC EMPLOYEES' RETIREMENT FUND
143 W. Market St., Suite 800
Indianapolis, IN 46204
Contact: L. H. Earle II, Executive Sec., (317) 232-1615

Information current as of 3/31/88; all figures at book value

Total assets: $2.9 billion
U.S. government securities and agencies: $1.3 billion
Corporate bonds: $1.1 billion
Mortgages: Government backed, $171.1 million
Cash and short-term securities: $322.2 million
Discretionary investment managers: Bank One Indianapolis; Indiana National Bank; Lehman Mgmt. Co.; Prime Capital Mgmt.; T. Rowe Price

INDIANA STATE TEACHERS' RETIREMENT FUND
506 State Office Building
Indianapolis, IN 46204
Contact: Robert D. Newland, Investment Officer, (317) 232-3868

Information current as of 2/29/88

Total assets: $1.5 billion
U.S. government securities and agencies: $540 million
Corporate bonds: $365 million
Mortgages: $423 million—government backed
Cash and short-term securities: $131 million
Discretionary investment managers: Alliance Capital Mgmt.; Bank One; Bank of New York; Baxter & Hoops; Indiana National Bank; Merchants Investment Counseling
Investment advisor: Todd Investment Advisors

IOWA PUBLIC EMPLOYEES RETIREMENT SYSTEM
600 E. Court
P.O. Box 9117
Des Moines, IA 50306
Contact: Larry Thompson, Investment Officer, (515) 281-5224

Information current as of 4/31/88; all figures at market value

Total assets: $3.9 billion
Common and preferred stock: $1.4 billion
Total fixed income: $2.0 billion
Real estate: $357.1 million
Cash and short-term securities: $232.1 million
Other investments: Venture capital, $12.4 million; LBO, $122.7 million
Percent of fund internally managed: 1%
Discretionary investment managers: Fixed income managers (long bonds) - J. P. Morgan Investment Mgmt., Inc.; Loomis, Sayles & Co. Fixed income managers (active bonds) - The Boston Co.; Criterion Investment Mgmt. Co. Fixed income managers (mortgage bonds) - Miller, Anderson & Sherrerd. Equity managers (active diversified) - Capital Guardian Trust Co.; Wellington Mgmt. Co. Equity Managers (active aggressive) - Rosenberg Capital Mgmt.; Equity managers (complementary) - Batterymarch Financial; Prudential Asset Mgmt. Co.;

Invista, Inc.; Mellon Capital Mgmt. Equity Real Estate Pools - Copley Real Estate Advisory; Heitman Advisory; JMB Institutional Realty Corp.; Aldrich, Eastman & Waltch. Venture Capital Funds - R. W. Allsop & Associates; Cable & Howse Ventures; Steinberg & Lyman; Lawrence Venture Associates; Interven Partners; Invest America; Inteven; Golder Thomacressey. LBO Funds - Kohlberg, Kravis, Roberts & Co.; TCW Special Placements Fund; Gibbons, Green, van Amerongen; WZAS.
Investment advisor: Wilshire Associates

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
Capitol Tower - 2nd Floor
400 W. 8th
Topeka, KS 66603
Contact: Marshall Crowther, Executive Secretary, (913) 232-6665

Information current as of 4/30/88

Total assets: $3 billion
Common and preferred stock: $946.5 million
U.S. government securities and agencies: $531 million
Corporate bonds: $349.6 million
Mortgages: $54.9 million—privately held
Other real estate: $188.2 million
Cash and short-term securities: $742.7 million
Other investments: IRBs $9.7 million; International (equity), $181.7 million; International (fixed), $52.3 million
Discretionary investment managers: Domestic equity managers - Capital Supervisors; Investment & Capital Mgmt.; Market Research & Mgmt.; Pilgrim, Baxter & Greig; Provident Investment Counsel; Reimer & Koger. Domestic fixed income managers - Loomis, Sayles & Co.; Pacific Investment Mgmt.; Peters, Gamm & West. International equity - Alliance Capital Mgmt.; Nomura Capital Mgmt. International Fixed Income - Julius Baer Investment Mgmt., Inc. Real estate - J. W. O'Connor. STIF manager - Payden & Rygel; Domestic custodian - Commerce Bank & Trust. International custodian - Bankers Trust Co. Domestic security lending - Marine Midland Bank. International security lending - Bankers Trust Co. Investment consultant - Callan Associates, Inc.

KENTUCKY RETIREMENT SYSTEMS
1260 Louisville Rd.
Frankfort, KY 40601
Contact: Bobby J. McKee, General Manager, (502) 564-4646

Information current as of 3/21/88

Total assets: $2.3 billion
Common and preferred stock $765 million
U.S. government securities and agencies: $423 million
Corporate bonds: $289 million
Mortgages: $378 million—government backed
Other real estate: $77 million
Cash and short-term securities: $368 million
Percent of fund internally managed: 26%
Investment advisors: Capital Supervisor; Munder Capital Mgmt., Heitman Advisory

KENTUCKY TEACHERS' RETIREMENT SYSTEM
216 W. Main Street
Frankfort, KY 40601
Contact: Stuart A. Reagan, Deputy Executive Secretary, (502) 564-2057

Information current as of 2/29/88

Total assets: $2.7 billion
Common and preferred stock: $555.1 million
U.S. government securities and agencies: $1.0 billion
Corporate bonds: $460.1 million
Mortgages: $189 million—government backed
Other real estate: $34.5 million
Cash and short-term securities: $454.9 million
Percent of fund internally managed: 9%
Investment advisors: Todd Investment Advisors; Invesco Capital Mgmt.; First Kentucky Co.

MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF LOUISIANA
6750 Van Gogh Ave.
Baton Rouge, LA 70806
Contact: Doris J. Cook, Administrative Director, (504) 925-4810

Information current as of 2/29/38

Total assets: $89 million (par)
U.S. government securities and agencies: $153 million
Corporate bonds: $1 million
Mortgages: $4 thousand
Cash and short-term securities: $3 million
Other investments: $10.6 million
Investment advisor: Premier Investment Advisors

LOUISIANA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
P.O. Box 44516, Capitol Station
Baton Rouge, LA 70804
Contact: Dr. Larry D. Quisenberry, Secretary-Treasurer, (504) 925-6484

Information current as of 12/31/87

Total assets: $572.2 million
Common and preferred stock: $32.9 million
U.S. government securities and agencies: $227.7 million (par)
Corporate bonds: $252.4 million (par)
Cash and short-term securities: $59.2 million
Other investments: Accounts receivable $8 thousand, Fixed assets inventory $21 thousand
Percent of fund internally managed: 1%
Investment advisor: Hibernia National Bank

MAINE STATE RETIREMENT SYSTEM
State House Station #46
Augusta, ME 04333
Contact: Claude R. Perrier, Exec. Director, (207) 289-3461

Information current as of 2/29/88; all figures at market value

Total assets: $1.3 billion
Common and preferred stock: $561.3 million
U.S. government securities and agencies: $321.4 million
Corporate bonds: $169.5 million
Other real estate: $13.7 million
Cash and short-term securities: $239.7 million
Other investments: Oil & gas $2.9 million; Travelers - separate accounts - $18.5 million
Discretionary investment managers: Alliance Capital; FLA Asset Mgmt.; Maine National Bank; Massachusetts Financial Services; Putnam Advisory; Gouws Capital; Property Capital Advisors; Morgan Guaranty; Evans & Moxon; Dillon Read; First Reserve Energy
Investment advisor: Wilshire Associates

MARYLAND STATE RETIREMENT AND PENSION SYSTEM
301 W. Preston St.
Baltimore, MD 21201
Contact: Arthur M. Lynch, Jr., Director, Actively Managed Investments, State Investment Agency, (301) 225-1024

Information current as of 2/29/88; all figures at market value

Total assets: $8.5 billion
Common and preferred stock: $2.4 billion
U.S. government securities and agencies: $683 million
Dedicated bonds: $4.2 billion
Corporate bonds: $537.6 million
Mortgages: $257.6 million—government backed
Other real estate: Commingled funds, $129 million
Cash and short-term securities: $315 million
Percent of fund internally managed: 75%
Discretionary investment managers: Equity: Capital Guardian; Dimensional Fund Advisors; Hagler, Mastrovita & Hewitt; Investment Counselors of Maryland; Scudder, Stevens & Clark; Wellington Trust Co.; Fixed income—Investment Counselors of Maryland; Mercantile-Safe Deposit & Trust Co.; Pacific Investment Mgmt.; Standish, Ayer & Wood

STATE OF MICHIGAN RETIREMENT SYSTEM
425 W. Allegan St., Treasury Bldg.
Lansing, MI 48922
Contact: William A. Amerman, Director of Investments, (517) 373-3140

Information current as of 12/31/87

Total assets: $14 billion
Common and preferred stock: $6.3 billion
U.S. government securities and agencies: $2.1 billion
Corporate bonds: $2.3 billion
Mortgages: $1 billion—privately held, $0.2 billion; government-backed, $0.8 billion
Other real estate: $0.2 billion
Cash and short-term securities: $2.0 billion
Percent of fund internally managed: 100%

MINNESOTA STATE BOARD OF INVESTMENT
Room 105 MEA Bldg.
55 Sherburne Ave.
St. Paul, MN 55155
Contact: Howard J. Bicker, Exec. Dir., (612) 296-3328

Information current as of 12/31/87; all figures at market value

Total assets: $9.1 billion
Common and preferred stock: $3.3 billion
Fixed income: $4.6 billion
Other real estate: Investment in commingled funds: Commitments: $385 million, Funded: $$358.6 million
Cash and short-term securities: $625.2 million
Other investments: Venture capital and resource funds: Commitments $363 million, Funded $176 million
Percent of fund internally managed: 45.7%
Discretionary investment managers: Common stocks: Fred Alger Mgmt., Inc., Alliance Capital Mgmt. Corp., Beutel Goodman Capital Mgmt., Ltd., BMI Capital Corp., Forstmann Leff Associates, Hellman Jordan Mgmt. Co., IDS Advisory, Investment Advisers, Inc., Lieber and Co., Peregrine Capital Mgmt., Inc., Waddell & Reed, Wilshire Associates. Bonds: Investment Advisers, Inc., Lehman Mgmt. Co., Inc., Miller, Anderson and Sherrerd, Morgan Stanley Asset Mgmt.; Peregrine Capital, Western Asset Mgmt. Real estate: Aetna Life and Casualty, Equitable Real Estate Group, Prudential Investment Mgmt. Corp., RREEF,

Heitman Advisory Corp., Trust Co. of the West, State Street Bank and Trust. Venture capital: Allied Capital, DSV Mgmt., Ltd., First Century, First Chicago, Inman and Bowman Mgmt., Investment Advisors, Inc., Kohlberg, Kravis, Roberts and Co., Matrix Partners, Norwest Venture Capital Mgmt., Smith Barney Venture Corp., Summit ventures, Superior Venture. Resource funds: Amgo, Apache Corp.
Investment advisor: Richards & Tierney, Inc.

PUBLIC EMPLOYEES RETIREMENT SYSTEM OF MISSISSIPPI
429 Mississippi St.
Jackson, MS 39201-1005
Contact: Eddie B. Vandiver, Deputy Director/Investments, (601) 359-2255

Information current as of 3/31/88

Total assets: $3.1 billion (book)
Common and preferred stock: $730.5 million (book)
U.S. government securities and agencies: $1.7 billion (market)
Corporate bonds: $575.7 million (market)
Cash and short-term securities: $117.8 million (book)
Discretionary investment managers: Equity managers: Bankers Trust Co.; The Boston Company Institutional Investors; Fayez Sarofim & Co.; Invesco Capital Mgmt.; Sun Bank, N.A. Fixed income managers: Criterion Investment Mgmt. Co.; Dreyfus Mgmt., Inc.; Lehman Mgmt. Co.; Pacific Investment Mgmt. Co.; Wells Fargo Investment Advisors

MISSOURI STATE EMPLOYEES' RETIREMENT SYSTEM
906 Leslie Blvd.
P.O. Box 209
Jefferson City, MO 65102
Contact: Steve Yoakum, Executive Director, (314) 751-2342

Information current as of 2/29/88

Total assets: $1.1 billion
Common and preferred stock: $576.6 million
U.S. government securities and agencies: $200.4 million
Corporate bonds: $117.7 million
Mortgages: $30.1 million—privately held, $25.3 million; government-backed, $4.9 million
Other real estate: $60.8 million
Cash and short-term securities: $112.7 million
Other investments: Venture capital, $12.4 million
Discretionary investment managers: Alliance Capital; CFW; Delaware Inv. Advisors; Investors Research; Sheilds Asset Mgmt.; Centerre Trust Co.; Loomis Sayles; Wentworth, Hanser & Violich; Eastdil; First Chicago; The Kirk Organization

MISSOURI LOCAL GOVERNMENT EMPLOYEES RETIREMENT SYSTEM
P.O. Box 1665
Jefferson City, MO 65102
Contact: Keith E. Hughes, (314) 751-3666

Information current as of 6/30/87

Total assets: $482.9 million
Common and preferred stock: $183.2 million
U.S. government securities and agencies: $156 million
Corporate bonds: $68 million
Other real estate: $516 thousand
Cash and short-term securities: $74.1 million
Investment advisors: Centerre Trust Co.; Delaware Investment Advisors; Hoisington Investment Mgmt.; Invesco Capital Mgmt.; Lehman Mgmt. Co.; Loomis, Sayles and Co.; United Missouri Investment Counsel Service

MONTANA PUBLIC EMPLOYEES' RETIREMENT DIVISION
Capitol Station
Helena, MT 59601
Contact: James R. Penner, Asst. Investment Officer, (406) 442-1970

Information current as of 6/30/87

Total assets: $602.7 million
Common and preferred stock: $59.0 million
U.S. government securities and agencies: $78.3 million
Corporate bonds: $349.1 million
Mortgages: $54.8 million—privately held
Cash and short-term securities: $61.5 million
Percent of fund internally managed: 100%

MONTANA STATE BOARD OF INVESTMENT
(Manages Combined Public Employees Funds)
555 Fuller
Helena, MT 59601
Contact: James R. Penner, Asst. Investment Officer, (406) 442-1970

Information current as of 6/30/87

Total assets: $1.2 billion
Common and preferred stock: $75.9 million
U.S. government securities and agencies: $142.7 million
Corporate bonds: $762.7 million
Mortgages: $109.2 million—privately held
Other real estate: $121 million
Cash and short-term securities: $97.4 million
Percent of fund internally managed: 100%

MONTANA TEACHERS' RETIREMENT SYSTEM
Capitol Station
Helena, MT 59620
Contact: James R. Penner, Asst. Investment Officer, (406) 442-1970

Information current as of 6/30/87

Total assets: $484.2 million
Common and preferred stock: $51.0 million
U.S. government securities and agencies: $64.4 million
Corporate bonds: $276.6 million
Mortgages: $55.9 million—privately held
Cash and short-term securities: $36.3 million
Percent of fund internally managed: 100%

STATE OF NEBRASKA INVESTMENT COUNCIL
107 Terminal Building
941 "O" Street
Lincoln, NE 68508
Contact: Donald J. Mathes, State Investment Officer, (402) 471-2043

Information current as of 2/29/88

Total assets: $860 million
Common and preferred stock: $266 million
U.S. government securities and agencies: $182.7 million
Corporate bonds: $110 million
Mortgages: $77 million—government backed
Cash and short-term securities: $123 million
Percent of fund internally managed: 72%
Discretionary investment managers: Alliance Capital Mgmt., Commerce Investment Mgmt., Investment Advisers, Invista, Travelers Keystone, KPSP, Provident Investment Counsel Trinity Investment Mgmt.
Investment advisor: Wilshire Associates

NEBRASKA RETIREMENT SYSTEMS
941 O Street, Room 107
Lincoln, NE 68508
Contact: Donald J. Mathes, State Investment Officer, (402) 471-2043

Information current as of 3/31/88

Total assets: $734 million
Common and preferred stock: $375 million
U.S. government securities and agencies: $35 million
Corporate bonds: $63 million
Mortgages: $160 million — Government backed
Cash and short-term securities: $8 million
Other investments: $93 million
Percent of fund internally managed: 65%
Investment advisor: Wilshire Associates

PUBLIC EMPLOYEES RETIREMENT SYSTEM OF NEVADA
693 W. Nye Lane
Carson City, NV 89703
Contact: Laura Wallace, Investment Officer, (702) 885-4200

Information current as of 2/29/88

Total assets: $2.5 billion
Common and preferred stock: $849 million
U.S. government securities and agencies: $697 million
Corporate bonds: $115.7 million
Mortgages: $434.4 million—privately held, $127.5 million; government backed, $306.8 million
Other real estate: $155.7 million
Cash and short-term securities: $233.7 million
Other investments: Venture capital, $5.4 million; international ADR's $48.9 million
Discretionary investment managers: Criterion; Invesco; Loomis-Sayles; Alliance; Wells Fargo; DFA; Axe Core; Columbine; Bay Partners; Golder; Thomas Cressey; Balch-Hardy; Bankers; Putnam; State Street; Patterson; Karsten; Heitman; Prudential; TCW; JP Morgan; JMB; PM Realty
Investment advisors: Mercer-Meidinger-Hansen; Pension Realty Advisors; Wilshire Associates

STATE OF NEW JERSEY, DIVISION OF INVESTMENT
CN 290
349 W. State St.
Trenton, NJ 08540
Contact: Roland Machold, Director, (609) 292-5106

Information current as of 6/30/88

Total assets: $24.4 billion
Common and preferred stock: $10.2 billion
U.S. government securities and agencies: $9.5 billion
Corporate bonds: $2.0 billion
Mortgages: $2.2 billion
Cash and short-term securities: $0.5 billion
Percent of fund internally managed: 100%

NEW MEXICO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION
P.O. Box 2123
Santa Fe, NM 87504-2123
Contact: Judith K. Alderson, Director, (505) 827-4700

Information current as of 12/31/87

Total assets: $1.4 billion
Common and preferred stock: $267.3 million
U.S. government securities and agencies: $471.2 million
Corporate bonds: $292.7 million
Other real estate: $15 million
Cash and short-term securities: $256.9 million
Percent of fund internally managed: 3%
Discretionary investment managers: Fiduciary Trust International; Wentworth; Hauser & Violich; Loomis, Sayles & Co.; Criterion Investment Mgmt.; Invesco Mgmt. Co.
Investment advisor: Wilshire Associates

NEW MEXICO EDUCATIONAL RETIREMENT BOARD
P.O. Box 1029
Santa Fe, NM 87504-1029
Contact: John E. Young, Investment Officer, (505) 827-8030

Information current as of 2/29/88

Total assets: $1.5 billion
Common and preferred stock: $50 million
U.S. government securities and agencies: $820 million
Corporate bonds: $375 million
Mortgages: $200 million—government backed
Cash and short-term securities: $55 million
Percent of fund internally managed: 100%
Investment advisor: Vaughan, Nelson, Scarborough & McConnell, Inc.

NEW YORK STATE & LOCAL RETIREMENT SYSTEMS
Alfred E. Smith State Office Building
Albany, NY 12236
Contact: John Hull, Deputy Comptroller (518) 474-4003

Information current as of 2/29/88; all figures at book value

Total assets: $35.6 billion
Common and preferred stock: $16.9 billion (market)
U.S. government securities and agencies: $11 billion
Corporate bonds: $4 billion
Mortgages: $2.7 billion—privately held, $2.5 billion; government backed, $204 million
Other real estate: $206 million
Cash and short-term securities: $1.2 billion
Other investments: $329 million
Percent of fund internally managed: 90%
Investment advisors: Wilshire Associates; Pension Realty Advisors

NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
10 Corporate Woods Drive
Albany, NY 12211
Contact: Edward J. Reno, Securities Investment Officer, (518) 447-2750

Information current as of 12/31/87; all figures at book value

Total assets: $19.7 billion
Common and preferred stock: $8.5 billion
U.S. government securities and agencies: $3.6 billion
Corporate bonds: $4.1 billion
Mortgages: $1.6 billion—privately held, $573.7 million; government backed, $1 million
Other real estate: $320 million
Cash and short-term securities: $500 million
Other investments: $124 million
Percent of fund internally managed: 84.6% Discretionary investment managers: Bernstein; Lehman; Oppenheimer; Beutel Goodman; Glickenhaus; General American
Investment advisor: Buck Pension Fund Services

NORTH CAROLINA RETIREMENT SYSTEMS
325 N. Salisbury St.
Raleigh, NC 27611
Contact: C. Douglas Chappell, Director, (919) 733-7282

Information current as of 12/31/87

Total assets: $12.5 billion
Common and preferred stock: $3.1 billion
U.S. government securities and agencies: $2.4 billion
Corporate bonds: $5.3 billion
Mortgages: $1.4 billion—government backed GNMA
Other real estate: $175 million
Cash and short-term securities: $31 million
Percent of fund internally mananged: 74%
Discretionary investment managers: Real estate: NCNB National Bank; Wachovia Bank & Trust Co.; Aetna Life Insurance Co.; Goldman Sachs; Cigna Capital; Security Capital. Equity: Alliance Capital Mgmt.
Investment advisors—Equity: NCNB National Bank; Thorndike, Doran, Paine & Lewis; First Citizens Bank; Wachovia Bank & Trust Co.; First Union National Bank

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM
P.O. Box 1214
Bismarck, ND 58501
Contact: Leroy Gilbertson, Financial Director, (701) 224-2173

Information current as of 4/25/88

Total assets: $290 million
Common and preferred stock: $130 million
Fixed income: $125 million
Other investments: $23 million, International equities - $12 million real estate
Discretionary investment managers: Equity managers: Sanford C. Bernstein & Co.; Investment Advisers Inc.; John McStay Investment Counsel; State Street Bank; Wilshire Associates. Fixed income managers: Bank of North Dakota; Criterion Investment Mgmt. Co.; Lehman Mgmt. Co. Inc.; Western Asset Mgmt. Co. Real Estate Managers: JMB Institutional Realty Corp.; J.P. Morgan Investment Mgmt., Inc.; Trust Company of the West
Investment advisor: Callan Associates

NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT
P.O. Box 7100
Bismarck, ND 58502
Contact: John Thrasher, Investment Director, (701) 224-4885

Information current as of 12/31/87

Total assets: $309.5 million
Common and preferred stock: $85.8 million
U.S. government securities and agencies: $153.3 million
Corporate bonds: $33.0 million
Mortgages: $891.5 thousand
Other real estate: $8 million
Cash and short-term securities: $28.5 million
Investment advisor: Callan Associates

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM
277 E. Town St.
Columbus, OH 43215
Contact: Robert A. McLaughlin, Investment Officer, (614) 480-7370

Information current as of 2/29/88

Total assets: $16 billion
Common and preferred stock: $4 billion
Corporate bonds: $1 billion
Mortgages: $6.4 billion—privately held, $60 million; government backed, $3 billion
Other real estate: $342 million
Cash and short-term securities: $546 million
Other investments: Venture capital $30 million
Percent of fund internally managed: 97%
Investment advisors: Real estate - Security Capital; Bristol Group; Cigna; Wells Fargo; NCNB; Rothschild

THE STATE TEACHERS RETIREMENT SYSTEM OF OHIO
275 East Broad Street
Columbus, OH 43215
Contact: Daniel M. Szente, Asst. Director, Investments, (614) 227-4062

Information current as of 12/31/87

Total assets: $13.4 billion
Common and preferred stock: $4 billion
U.S. government securities and agencies: $5 billion
Corporate bonds: $609.8 million
Mortgages: $1 billion—government backed
Other real estate: $1.6 billion
Cash and short-term securities: $700.7 million
Other investments: Venture capital: $17.5; Canadian/miscellaneous bonds: $426.6 million
Percent of fund internally managed: 100%

OHIO SCHOOL EMPLOYEES' RETIREMENT SYSTEM
45 North Fourth St.
Columbus, OH 43215
Contact: Paul M. Kubinsky, Director of Investments, (614) 221-7012

Information current as of 2/29/88; all figures at book value

Total assets: $2.1 billion
Common and preferred stock: $662.2 million
U.S. government securities and agencies: $200.3 million
Corporate bonds: $267.5 million
Mortgages: $432.8 million
Other real estate: $291.6 million
Cash and short-term securities: $227.3 million
Other investments: Venture capital, $18.9 million
Percent of fund internally managed: 70%
Discretionary investment managers: Real estate commingled funds: NCNB; Equitable Real Estate Investment Mgmt.; Prudential Asset Mgmt. Group
Investment advisor: Mellon Capital Mgmt. Corp.

OHIO HIGHWAY PATROL RETIREMENT SYSTEM
4795 Evanswood Dr.
Columbus, OH 43229
Contact: R. Dean Huffman, Executive Director, (614) 466-2268

Information current as of 12/31/87

Total assets: $146.8 million
Common and preferred stock: $48.3 million
U.S. government securities and agencies: $67.9 million

Corporate bonds: $28.6 million
Cash and short-term securities: $2.0 million
Percent of fund internally managed: 100%
Investment advisor: Duff & Phelps

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO
230 East Town Street
Columbus, OH 43215
Contact: Theodore G. Hall, Investment Manager (614) 228-4076

Information current as of 3/31/88; all figures at book value

Total assets: $2.4 billion
Common and preferred stock: $675.5 million
U.S. government securities and agencies: $353 million
Corporate bonds and private placements: $658.3 million
Mortgages: $233.5 million—government backed
Other real estate: $120 million
Cash and short-term securities: $361.4 million
Other investments: Venture capital, $11.4 million
Percent of fund internally managed: 67%
Discretionary investment managers: Equity-Valueline, Timco, Bankers Trust, Axe Core, Society Bank and Duff & Phelps
Investment advisors: Real estate-Schroder Real Estate Associates, Meyer Investment Properties, Inc.

OREGON PUBLIC EMPLOYEES' RETIREMENT SYSTEM
158 State Capitol
Portland, OR 97207-0073
Contact: James C. George, Investment Manager, (503) 378-4111

Information current as of 12/31/87

Total assets: $7.8 billion
Common and preferred stock: $4.3 billion—domestic, $3.6 billion; international, $694 million
U.S. government securities and agencies: $792 million
Corporate bonds: $1.4 billion
Mortgages: $425 million
Other real estate: $226 million
Other investments: LBO-$345 million; Venture capital-$71 million
Percent of fund internally managed: 36% (bonds & mortgages)
Discretionary investment managers: International—Cursitor-Eaton Asset Mgmt.; Daiwa International Mgmt. Capital; Globe-Finlay; Matushka, Moser Partners; Nomura Capital Mgmt., Inc.; Rowe, Price-Fleming International, Inc.; Wertheim-Phillipe. Common stock fund—Atalanta/Sosnoff Capital Corp.; Batterymarch Financial; BEA Associates, Inc.; Columbia Mgmt. Co.; Cutler & Co., Inc.; Fayez Sarofim & Co.; Franklin Asset Mgmt.; Froley, Revy Investment Co., Inc.; General American Investors, Inc.; Harris Associates; Hotchkis & Wiley; Olympic Capital Mgmt.; Pinnacle Associates Ltd.; Quest Advisory Corp.; Rosenberg Capital Mgmt.; George B. Springman; Thompson/Rubinstein Investment Mgmt.; William D. Witter; Franklin Asset Mgmt.
Investment advisors: CBO—Kohlberg Kraus & Roberts; Real estate—Alex. Brown Realty Advisors; Frank Russell Co.; Wilshire Associates

PENNSYLVANIA STATE EMPLOYEES' RETIREMENT SYSTEM
909 Green St.
Harrisburg, PA 17102
Contact: David D. Burnett, Investment Analyst, (717) 787-9008

Information current as of 2/29/88

Total assets: $7.7 billion
Common and preferred stock: $3.4 billion
U.S. government securities and agencies: $1.7 billion
Corporate bonds: $759.9 million
Mortgages: $753.2 million—privately held, $496.7; government backed, $256.5
Other real estate: $427.6 million
Cash and short-term securities: $636.4 million
Other investments: Venture capital, $61.3 million
Discretionary investment managers: Equity—Barrow, Hanley, Mewhinney & Strauss, Inc.; First Pennsylvania Bank; Geewax, Terker & Co.; Glickenhaus and Co.; McGlinn Capital Mgmt.; Mellon Bank; Miller, Anderson & Sherrerd; Pilgrim, Baxter, Greig & Associates; Provident Investment Counsel; Sun Bank; Trinity Investment Mgmt. Corp.; Wells Fargo Investment Advisors. Fixed income—CIGNA; Delaware Investment Advisers; W. R. Huff Asset Mgmt.; Mellon Bank; Miller, Anderson & Sherrerd; Payden & Rygel; Fidelity Bank; Latimer & Buck Financial Services, Inc.; Pennsylvania State Treasury Dept. Real estate—Aetna Life Insurance Co.; Corporate Property Investors; F.I.A. Associates, Inc.; John Hancock Mutual Life Insurance Co.; Heitman Advisory Corp.; JMB Institutional Realty Advisors; The Prudential Asset Mgmt. Co.; PSI Institutional Realty; Security Capital Real Estate Corp. Venture capital—APA/Fostin Pennsylvania Venture Capital Fund; Butcher & Singer/Keystone Venture II, L.P.; CEO Venture Fund-S; Fostin Capital Associates; Genesis Seed Fund, Ltd.; Maverick Pennsylvania Fund; NEPA Venture Fund, L.P.; Pennsylvania Fund #1; Pittsburgh Seed Fund; PNC Venture Group I; TDH II Limited; Zero Stage Capital II - Central Pennsylvania Limited Partnership

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
P.O. Box 1165
Harrisburg, PA 17108
Contact: Donald Halke, Investment Accountant, (717) 787-2065

Information current as of 4/1/88

Total assets: $212.3 million
Common and preferred stock: $81.5 million
U.S. government securities and agencies: $22.4 million
Corporate bonds: $4.9 million
Mortgages: $12.3 million—privately held, $3.6; government-backed, $8.7
Other real estate: $32 million
Cash and short-term securities: $14 million
Investment advisors: Newbold; Fidelity; Merrill Lynch; CIGNA; JMB; PRISA; Marine

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM
Box 125
Harrisburg, PA 17108
Contact: Clay Mansfield, Chief Investment Officer, (717) 787-9060

Information current as of 12/31/87; all figures at market value

Total assets: $11.3 billion
Common and preferred stock: $3.9 billionU.S. government securities and agencies: $3.3 billion
Corporate bonds: $784 million
Mortgages: $997 million—government backed
Other real estate: $729 million
Cash and short-term securities: $1.6 billion
Other investments: $42 million — Venture capital
Percent of fund internally managed: 2%
Discretionary investment managers: Investment advisors—Bankers Trust Co.; CEO Venture Fund; Cashman, Farrell & Associates; Commonwealth of Pennsylvania; Commonwealth Ventures Partners; Criterion Investment Mgmt. Co.; Delaware Investment Advisors; Dreman Value Mgmt.; Fidelity Bank; First Pennsylvania Bank; Genesis Seed Fund; Glenmede Trust Co.; Jones Lang Wootton Realty Advisors; Loomis, Sayles & Co.; Mellon Bank, N.A.; Mellon Capital Mgmt.; Miller Anderson & Sherrerd; NEPA Mgmt. Corp.; Oppenheimer Capital Corp.; Oppenheimer Option Mgmt.; Pacific Investment Mgmt. Co.; Pennsylvania Investment Private Placement; Pennsylvania Venture Capital Fund; Pittsburgh National Bank; Provident Capital Mgmt., Inc.; Putnam Advisory Co., Inc.; Trivest Venture Fund; Webster Capital Mgmt. Corp. Small managers equity fund—Addison Capital Mgmt.; Advisor Investment Managers, Inc.; Ariston Capital Mgmt. Corp.; Birmingham Capital Mgmt. Co., Inc.; Brandywine Asset Mgmt.; Crabbe-Huson Co.; Crawford Investment Counsel, Inc.; Cutler & Co., Inc.; Eagle Asset Mgmt., Inc.; Evans & Moxon Capital Mgmt., Inc.; Greenleaf Capital Mgmt.; Gulf Investment Mgmt., Inc.; Newbold's Asset Mgmt.; Scheetz, Smith & Co., Inc.; Trust Co. of the West; Edward A. Viner & Co., Inc./Hudson Capital Advisors; Westport Asset Mgmt., Inc.

EMPLOYEES RETIREMENT SYSTEM OF RHODE ISLAND
198 Dyer St.
Providence, RI 02903
Contact: Jerome F. Williams, Deputy General Treasurer for Finance, (401) 277-2287

Information current as of 2/29/88

Total assets: $1.5 billion
Common and preferred stock: $470.8 million
U.S. government securities and agencies: $516.5 million
Corporate bonds: $135.8 million
Cash and short-term securities: $384.6 million
Other investments: $2.3 million — Venture fund
Investment advisor: Fleet National Bank

SOUTH CAROLINA RETIREMENT SYSTEM
P.O. Box 11778
Columbia, SC 29211
Contact: Mrs. Shakun Tahiliani, Investment Coordinator, (803) 734-2101

Information current as of 3/31/88

Total assets: $4.8 billion
U.S. government securities and agencies: $2.1 billion
Corporate bonds: $1.2 billion
Mortgages: $953 million—privately held, $295 million; government backed, $658 million
Cash and short-term securities: $529 million
Other investments: $1 million, municipals
Percent of fund internally managed: 100%
Investment advisor: Jamison Eaton & Wood Co.

SOUTH DAKOTA RETIREMENT SYSTEM
216 East Capital
Pierre, SD 57501
Contact: Steve Meyers, State Investment Officer, (605) 335-5023

Information current as of 6/30/87; all figures at market value

Total assets: $1 billion
Common and preferred stock: $469 million
U.S. government securities and agencies: $179 million
Corporate bonds $102.8 million
Mortgages: $179 million—government backed
Other real estate: $27.7 million
Cash and short-term securities: $98.8 million
Other investments: $14.6 million — Limited partnership
Percent of fund internally managed: 87%
Discretionary investment managers: Bear Stearns, Trinity Mgmt., Dremen Value Mgmt., Frank Russell, Wachovia Real Estate, Security Capital Real Estate, Smith Vasiliou
Investment advisor: Investment Council

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
13th Floor, Andrew Jackson State Office Bldg.
Nashville, TN 37219
Contact: Charles H. Webb, III, Investment Div., (615) 741-2643

Information current as of 3/31/88; all figures at market value

Total assets: $6.3 billion
Common and preferred stock: $1.9 billion
U.S. government securities and agencies: $1.1 billion
Corporate bonds: $1.4 billion
Mortgages: $468.7 million—privately held, $50.8; million
Cash and short-term securities: $794.2 million
Other investments: Foreign stocks, $309.0 million; Foreign bonds, $327.8 million
Percent of fund internally managed: 100%

EMPLOYEES RETIREMENT SYSTEM OF TEXAS
P.O. Box 13207
Austin, TX 78711
Contact: Nancy G. Goerdel, Deputy Director of Investments, (512) 476-6431

Information current as of 2/29/88

Total assets: $4.5 billion
Common and preferred stock: $878.5 million
U.S. government securities and agencies: $2.2 billion
Corporate bonds: $795.2 million
Mortgages: $479 million—government backed, $549.0 million (pass-throughs)
Cash and short-term securities: $109.2 million
Percent of fund internally managed: 100%
Investment advisors: Invesco Capital Mgmt., (equity); Duff & Phelps Investment Mgmt., Inc. (fixed income)

TEXAS COUNTY & DISTRICT RETIREMENT SYSTEM
400 West 14th St.
Austin, TX 78701
Contact: J. Robert Brown, Director (512) 476-6651

Information current as of 12/31/87

Total assets $1.6 billion
U.S. government securities and agencies: $791 million
Corporate bonds: $223.8 million
Mortgages: $541 million
Cash and short-term securities: $15 million
Percent of fund internally managed: 100%

New from

PENSION WORLD

Mini-directories now available!
Each year Pension World compiles and publishes several vitally important mini-directories. You can now obtain additional copies of these handy year-round reference guides for your office or for a colleague's. Order your copies today!

Directory of Master and Directed Trust Services.....$ 9.95

Portfolio Managers Directory.....$ 9.95

Software Products Directory.....$14.95

State Retirement Systems Directory.....$ 9.95

Send prepaid orders to:

Book Department
Communication Channels, Inc.
6255 Barfield Road
Atlanta, GA 30328

Pension World Readers are Powerful Readers.

Readers' Titles*

Chairman	5%
CEO/President	12%
Vice President/Finance	10%
Vice President/Other	8%
CFO/Treasurer/Controller	14%
Director	6%

55% of Pension World readers hold executive level titles.*

78% of Pension World readers are personally involved in their organization's investment decision-making process.*

Make the right move with your sales message.

Reach the powerful readers of Pension World and increase your share of this $2 trillion market.

For advertising information, call Executive Group Publisher Charles E. Lloyd at (404) 256-9800.

Pension World

A Sound Investment In Your Future

*Readex Study

TEACHER RETIREMENT SYSTEM OF TEXAS
1001 Trinity St.
Austin, TX 78701
Contact: Joe W. Perrone, Chief Inv. Officer, (512) 397-6460

Information current as of 2/29/88

Total assets: $16.2 billion (book)
Common and preferred stock: $4.7 billion (book)
U.S. government securities and agencies: $3.8 billion
Corporate bonds: $2.5 billion
Mortgages: $3.2 billion—privately held, $308 million; government backed, $2.8 billion
Other real estate: $1.5 billion
Cash and short-term securities: $585 million
Other investments: $29 million
Percent of fund internally managed: 100%
Investment advisor: Thorndike, Paine, Lewis & Doran

UTAH STATE RETIREMENT SYSTEMS
540 East, 200 South
Salt Lake City, UT 84102
Contact: W. Dan Smith, Investment Officer, (801) 355-3884

Information current as of: 12/31/87

Total assets: $2.9 billion
Common and preferred stock: $1.3 billion
U.S. government securities and agencies: $890 million
Corporate bonds: $148 million
Mortgages: $107 million—privately held, $50 million, government backed, $57 million
Other real estate: $245 million
Cash and short-term securities: $200 million
Percent of fund internally managed; 65%
Investment advisors: Atalanta/Sosonoff, Smoot Miller Cheney, Valueline, Wasatch Advisors, FIA Associates, State Street Bank

VIRGINIA SUPPLEMENTAL RETIREMENT SYSTEM
P.O. Box 6-C
Richmond, VA 23214
Contact: Timothy R. Barron, Director of Investments, (804) 344-3157

Information current as of 4/1/88; all figures at market value

Total assets: $7.5 billion
Common and preferred stock: $4.1 billion
U.S. government securities and agencies: $838 million
Corporate bonds: $1.4 billion
Mortgages: $198.1 million
Other real estate: $296.7 million
Cash and short-term securities: $612.7 million
Other investments: $8.4 million, investment in state office buildings
Percent of fund internally managed: 17.4%
Discretionary investment managers: Ardsley Partners; Bankers Trust Co., Sanford C. Bernstein & Co., DCM Advisers, Hutson Mgmt. Co., Lehman Mgmt. Co., MacKay-Shields Financial Corp., Merganser Capital Mgmt., Miller, Anderson & Sherrerd, Rosenberg Institutional Equity Mgmt., Security Capital Mgmt., Concord Capital Mgmt., Corinthian Capital Co., Delaware Investment Advisors, Fidelity Mgmt. Trust Co., GAMCO Investors, Inc.; IDS Advisory Group; Jundt/Capen Associates; Lincoln Capital Mgmt.; Loomis, Sayles & Co., Inc.; McKenzie, Walker Investment Mgmt.; Mellon Capital Mgmt. Corp.; Nicholas-Applegate Capital Mgmt.; Pacific Financial Research; Schafer Capital Mgmt. Co.; Donald Smith & Co., Inc., Massachusetts Financial Services Co., Sovran Capital Mgmt. Corp.; Equitable Life Assurance Society of the U.S.; LaSalle Advisors; J.P. Morgan Investment Mgmt.; New England Mutual Life; Phoenix Mutual Life; Prudential Insurance Corp. of America; The RREEF Corp.

WEST VIRGINIA PUBLIC EMPLOYEES RETIREMENT SYSTEM
Bldg. 5, Room 1052, Capital Complex
Charleston, WV 25305
Contact: Diana Will, Investment Div., State Treasurer's Office, Room E-120, State Capitol Bldg., Charleston, WV 25305, (304) 346-9100

Information current as of 3/31/88

Total assets: $1 billion
U.S. government securities and agencies: $575.8 million
Corporate bonds: $166.7 million
Mortgages: $118.7 million—privately held, $28.2 million; government backed, $90.4 million
Cash and short-term securities: $162.2 million
Percent of fund internally managed: 18.5%
Investment advisor: Investment Advisers, Inc.

WEST VIRGINIA TEACHERS' RETIREMENT SYSTEM
Bldg. 5, Room 1014
1900 Washington St. E
Charleston, WV 25305
Contact: Diana Will, Asst. Dir. of Investments, State Treasurer's Office, Room E-120, State Capitol Bldg., Charleston, WV 25305, (304) 346-9100

Information current as of 3/31/88

Total assets: $239.3 million
U.S. government securities and agencies: $192.2 million
Corporate bonds: $14.8 million
Mortgages: $26.5 million—government backed
Cash and short-term securities: $5.8 million
Percent of fund internally managed: 5%
Investment advisor: Duff & Phelps

STATE OF WISCONSIN INVESTMENT BOARD
121 E. Wilson St.
P.O. Box 7842
Madison, WI 53707
Contact: Marshall Burkes, Executive Director, (608) 266-2381

Information current as of 12/31/87

Total assets: $14.4 billion
Common and preferred stock: $6.3 billion
U.S. government securities and agencies, corporate bonds & private placements: $6.1 billion
Mortgages: $130 million
Other real estate: $271 million
Cash and short-term securities: $1.6 billion
Percent of fund internally managed: 100%

WYOMING RETIREMENT SYSTEM
1st Floor, Herschler Bldg.
Cheyenne, WY 82001
Contact: Terry Hanley, Director, (307) 777-7691

Information current as of 12/31/87

Total assets: $1.1 billion
Common and preferred stock: $265.8 million
U.S. government securities and agencies: $315.8 million
Mortgages: $454.3 million—government backed
Cash and short-term securities: $30.5 million
Other investments: $20.8 million (guaranteed portion of SBA)
Discretionary investment managers: Alliance Capital Mgmt. Corp.; Trinity Investment Mgmt. Corp.; Bear Stearns Asset Mgmt.; Lehman Mgmt. Co., Dreman Investments; Norwest Bank

State Employee-Benefit Costs Rising

BY JOHN P. MACKIN
Senior Vice President
Martin E. Segal Co., New York

Between January 1987 and January 1988, the increase in the average cost of state employee health-benefit plans was more than double the rise in national medical-care costs as measured by the Consumer Price Index (CPI). About one-fifth of the state plans reported cost increases of more than 20 percent. And in three states, costs jumped by more than 35 percent.

These were among the principal findings of Martin E. Segal Co.'s 1988 survey of state employee health-benefit plans for the 12-month period ending in January 1988. The results contrast sharply with the findings of the firm's 1987 and 1986 annual surveys. Although averages conceal a wide diversity in state employee health-plan benefits and costs, in each of the two previous years the average total cost for the 50 state plans increased by substantially less than the medical component of the CPI.

In early 1988, the Martin E. Segal Co. surveyed the 50 state plans to obtain current information on plan participants and monthly contributions. The 1988 update tables show plan participants and health-maintenance organization (HMO) participation as of January 1988 (Table 1), and contributions to each of the 50 state plans for January 1988 and January 1987 (Tables 2, 3 and 4). In addition, these show the percentage of the total cost paid by each state in 1988 and 1987 for employee-only coverage, employee and family coverage, and retiree-only coverage, respectively.

The tables present contribution data for basic plans and do not include the numerous HMOs offered to state employees. For states with multiple benefit plans, the tables generally show contributions for only the "low" and "high" basic plans. Figures regarding average costs for the state plans and the distribution of plans by the percentage of the total cost paid by the state are based on the low basic plan, where applicable.

Plan participants

As of January 1988, the 50 state health-benefit plans covered more than four million active employees and retirees. The figures shown in Table 1 total almost 3.9 million people—3,104,500 covered employees and 778,700 covered retirees. However, for California and New York, the figures shown are for state employees and retirees only, and exclude the thousands of local government employees covered by these two state-administered plans.

HMO participation varies widely among the 50 states. The number of HMOs offered ranges from zero in six states to 10 or more in 15 states. States that offer 25 or more HMOs include California, Florida, New York, Ohio, Pennsylvania and Wisconsin.

Approximately 974,000 people, or more than 30 percent of the 3.1 million employees covered by the 50 state plans, are enrolled in HMOs. The percentage of employees enrolled in HMOs varies from less than 10 percent in 14 states to more than 50 percent in seven states: Wisconsin (77 percent), Arizona (72 percent), California (70 percent), Ohio (62 percent), Illinois (61 percent), Colorado (60 percent) and Massachusetts (53 percent).

The distribution of state plans by the percentage of employees enrolled in HMOs also varies greatly. About 91,000 of the 780,000 retirees covered by state plans are enrolled in HMOs. As expected, the percentage of retirees enrolled in HMOs is much smaller than the percentage of active employees—12 percent vs. 31 percent. In 40 states, the retirees enrolled in HMOs represent less than 6 percent of the total number of covered retirees. HMO participation by retirees is concentrated in a few states, with more than half of the retirees covered by the California and Wisconsin plans enrolled in HMOs.

Employee-only coverage

Currently, approximately 62 percent of the states (31 of the 50) pay 100 percent of the cost for employee-only coverage under at least one basic plan. For the 12-month period ended January 1988, however, the number of states that pay less than 80 percent of the cost for single coverage increased from four to eight.

For the 12-month period, the to-

STATE EMPLOYEE HEALTH BENEFIT PLANS
Percentage Increase (Jan. to Jan.)

Year Ended January	CPI Medical Care Component	Average Total Cost-50 State Plans		
		Employee Only	Employee & Family	Retiree Over 65
1988	6.2%	14.1%	12.8%	11.3%
1987	7.5	5.3	4.8	4.6
1986	6.9	3.5	2.8	1.7

tal cost for employee-only coverage increased in 43 states and remained the same in seven states. This differs substantially from last year's findings, when the total cost increased in 23 states, remained the same in 21 states and decreased in six states.

The percentage increases in the total cost for single coverage ranged from less than 10 percent in 18 states to more than 25 percent in eight states. Two states, New York and North Carolina, experienced cost increases of more than 45 percent.

Additionally, the average total cost for employee-only coverage increased to $93.15 for January 1988 from $81.62 for January 1987, while the percentage changes in individual plan's costs varied substantially. The 14.1 percent increase in the average total cost for employee-only coverage was more than twice the 6.2 percent rise in national medical care costs as measured by the CPI.

Family coverage

Slightly less than one-fourth of the states (12 of the 50) pay for the full cost of health benefits for employees and their dependents. Between 1987 and 1988 the distribution of plans by the state's share of the total cost for employee and family coverage changed, with 28 states paying less than 80 percent of the total cost for employee and family coverage under the low basic plan. In 10 of the 28 states, the state's share was less than half the total cost for family coverage.

Among 38 state plans where employees contribute for employee and family coverage, the average employee cost was $74.02 for January 1988. In 12 of the 38 states, employees' out-of-pocket costs for family coverage exceeds $100 a month.

For the 50 state plans, the average total cost for family coverage increased 12.8 percent to $212.28 for January 1988, up from $188.15 for January 1987. The percentage increase in the average total cost for family coverage was slightly more than double the 6.2 percent rise in the medical component of the CPI.

Retiree-only coverage

Table 4 shows 1988 and 1987 contributions for a single retiree age 65 or over with Medicare. Contribution data are presented for only 48 states because Indiana and Nebraska do not allow retirees 65 and over to continue participating in the state health-benefits plan.

Currently, almost half the states make no contributions toward the cost of retiree health-care benefits. At the other end of the scale, 16 states pay for the full cost of coverage for some or all single retirees age 65 or over with Medicare.

Among the 48 state plans that make access to coverage available to retirees, the average cost of coverage for a single retiree 65 or over with Medicare was $61.97 for January 1988—or 11.3 percent higher than the $55.66 average for January 1987.

In many states, the growing number of politically effective, retired public employees will continue to lobby for legislation providing for payment by the state of a larger portion of the cost of their health-care coverage. It is expected that some states will increase their share of total costs for retirees, and that an increasing number of states

"I wouldn't compromise on powerful features for our defined contribution plans."

"I wouldn't compromise on responsive service from employee benefit specialists."

We got AutoFax℠/MPR– the micro allocation system from SunGard

Powerful Features
- Efficiently handles 401(k), Profit Sharing and Money Purchase Plan allocations including tax reporting.
- Compliance testing for 415, 401(k) Anti-Discrimination and Top-Heavy tests.

Customer Service
- Superior support from a staff with experience in employee benefits.
- System training and benefit classes for my beginning employees and experienced administrators as well.

Flexibility
- Up to ten investment funds and ten contribution types.
- Various vesting schedules and earnings formulas including time-weighting.
- System proposal features for custom-designed plans.

Enhancements
- AutoFax/MPR is up-to-date and current with the most recent law requirements.
- System enhancements are made using my suggestions so I have a voice in the future of AutoFax/MPR.

SUNGARD® TRUST SYSTEMS INC.

4822 Albemarle Road
Charlotte, NC 28205
Telephone: 704/568-5180

will relate their share of total plan costs to the retiree's years of credited service.

State studies

In the next several years, it is anticipated that many states will authorize studies of the actuarial liabilities and funding costs for retiree health benefits. Also, some states may establish programs to start funding retiree health-care benefits on a level actuarial basis during employees' working years.

To a much greater extent in the future, retiree health-benefit plans will be designed to influence choices about care and providers. The enactment of catastrophic-coverage legislation this year may prompt states to re-evaluate the design and objectives of retiree health-benefit plans. In addition, there is likely to be a greater recognition of the importance of communications as a vehicle to encourage retirees to become more cost-conscious consumers of health care.

TABLE 1

Percentage of Covered Employees Enrolled in HMOs	Number of State Plans 1987	1988
70% and over	1	3
60% - 69%	2	3
50% - 59%	2	1
40% - 49%	6	6
30% - 39%	8	8
20% - 29%	10	9
10% - 19%	6	6
1% - 9%	7	8
0%	8	6

TABLE 2

State's Share of Total Cost for Employee Only Coverage	Number of State Plans 1987	1988
100%	32	31
90% - 99%	6	7
80% - 89%	8	4
70% - 79%	2	5
Less than 70%	2	3

TABLE 3

State's Share of Total Cost for Employee and Family Coverage	Number of State Plans 1987	1988
100%	12	12
90% - 99%	4	4
80% - 89%	7	6
70% - 79%	6	8
60% - 69%	6	3
50% - 59%	5	7
40% - 49%	6	6
Less than 40%	4	4

TABLE 4

State's Share of Total Cost for Single Retiree Age 65 or Over	Number of State Plans 1987	1988
100%	16*	16*
90% - 99%	3	3
80% - 89%	3	3
70% - 79%	—	1
60% - 69%	1	—
50% - 59%	1	1
10% - 49%	2	2
0%	24**	24**

* Includes three states (Colorado, Kentucky and New Jersey) that pay 100 percent only for single retirees with 20 or 25 years of service.

** Includes Indiana and Nebraska.

Cost management

State employee health-benefit plans utilize a wide variety of cost-management techniques, and these cost-management initiatives have played a major role in holding down increases in average plan costs. Although the average cost of state plans increased by more than twice the rise in the CPI medical-care component from January 1987 to January 1988, during the past three years the average cost of state plans has increased by approximately the same percentage as the medical component of the CPI.

Cost-management provisions introduced by state plans include: precertification- and preadmission-review programs; hospital length-of-stay assignments; concurrent-review and discharge planning; second-surgical-opinion programs; incentives for outpatient surgery and for diagnostic and preadmission tests performed on an outpatient basis; limitations on benefits for weekend admissions; audits of hospital and doctor bills; individual case management; home-health-care benefits; hospice benefits; wellness benefits and incentives for healthier lifestyles; and employee-assistance programs.

Also, in the past three years, states generally have been successful in holding down the costs of their employee health-benefit plans. These experiences indicate that cost-management initiatives can influence providers and make the health-care system more cost-effective. □

John Mackin is senior vice president and director of the governmental division of the Martin E. Segal Co., New York. He serves as a consultant to many large state and municipal benefits programs. Mr. Mackin received a BBA from the University of Miami, and a Master's and Ph.D. in economics from the University of Wisconsin.